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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/913,670	08/17/2001	Gerard De Haan	PHNL000643US	4537

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS  
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EXAMINER

AN, SHAWN S

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/913,670

Applicant(s)

DE HAAN ET AL.

Examiner

Shawn S An

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 July 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Response to Amendment***

1. As per Applicant's instruction as filed on 7/19/04, claims 1-5 and 7 have been amended.

### ***Response to Remarks***

2. Applicant's arguments with respect to all of the amended claims have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Herpel et al (5,450,133).

**Regarding claims 1 and 4**, Herpel et al discloses a method for motion estimation in video image data, comprising:

selecting parts of an image frame in which a first video image is significantly distinguished from a second video image, and determining, in the selected parts in the first and a second video image parameter sets of at least two motion models, wherein those selected parts of the image area in which motion was determined in previous video image data of a sequence of video images (Fig. 2, elements 22 and 24) (col. 2, lines 51-55).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Herpel et al as applied to claim 1 above, and further in view of De Haan et al (WO 99/16251).

**Regarding claim 2,** Herpel et al discloses dividing a current and a previous video image into respective plurality of blocks, and evaluating deviations between the current and the previous video block by block (col. 2, lines 51-55).

Herpel et al does not specifically disclose the selected parts in which a value of the deviation exceeds a predetermined threshold value.

However, De Haan et al teaches a device for motion estimation in video image data comprising a digital memory (Fig. 3, SC, SM) for storing a current and a previous video image, and determining parameter sets of at least two motion models (page 6, lines 13-26).

De Haan et al further teaches means for block-wise evaluation of the deviations between the current and the previous video image, in which the value of the deviation exceeds a predetermined threshold value (page 7, lines 7-20; page 30, lines 8-11).

De Haan et al further teaches that the image can be divided into some large blocks (page 8, lines 14-20).

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the device/method of motion estimation as taught by Herpel et al to incorporate the concepts as discussed above as taught by the De Haan et al so as to

determine motion parameter(s) in a more efficient method.

**Regarding claim 3**, Herpel et al does not particularly disclose the threshold value being based on the condition that the number of image area taken into account for determining the parameter sets is limited to a predetermined value.

However, Herpel et al discloses the number of image area taken into account (block by block) for determining the parameter sets (col. 2, lines 51-55), and De Haan et al teaches determining the parameter sets based on the threshold value (see above discussion).

Furthermore, a threshold value is normally a predetermined value.

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the device/method of motion estimation as taught by Herpel et al to incorporate the concept as discussed above as taught by the De Haan et al so that the threshold value is based on the condition that the number of image area taken into account for determining the parameter sets being limited to a predetermined value, thereby enhancing the efficiency of the motion estimation/compensation.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herpel et al (5,450,133) in view of De Haan et al (WO 99/16251).

**Regarding claim 5**, Herpel et al discloses a device for motion estimation in video image data comprising:

a digital memory (Fig. 2, 22) for storing a current and a previous video image; and

means for block-wise evaluation of the deviations between the current and the previous video image and for selecting of those blocks of the current and the previous video image, and means for determining parameter sets of at least two motion models in accordance with a selection criterion based on the selected blocks (Fig. 1, 16; col. 2, lines 51-55).

Herpel et al does not specifically disclose selecting of those blocks of the current and the previous video image in which the value of the deviation exceeds a predetermined threshold value.

However, De Haan et al teaches a device for motion estimation in video image data comprising a digital memory (Fig. 3, SC, SM) for storing a current and a previous video image, and determining parameter sets of at least two motion models (page 6, lines 13-26).

De Haan et al further teaches means for block-wise evaluation of the deviations between the current and the previous video image, in which the value of the deviation exceeds a predetermined threshold value (page 7, lines 7-20; page 30, lines 8-11).

De Haan et al further teaches that the image can be divided into some large blocks (page 8, lines 14-20).

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the device/method of motion estimation as taught by Herpel et al to incorporate the concepts as discussed above as taught by the De Haan et al so as to determine motion parameter(s) in more efficient way.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Herpel et al (5,450,133) in view of Lee et al (5,933,535).

**Regarding claim 7,** Herpel et al discloses a device for motion estimation in video image data receiving as an input a first and a second video image, comparing the first and the second video image, selecting those blocks exhibiting significant differences between the first and the second video images, and computing sets of at least two motion models and supplies motion data describing the displacement of image objects from the previous to the current image based on the selected blocks (Fig. 2, elements 22 and 24) (col. 2, lines 51-55).

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Lee fails to disclose a computer program product for motion estimation performing the above steps.

However, Lee et al teaches a computer program product for motion estimation (Fig. 1, 20).

Therefore, it would have been obvious to a person of ordinary skill in the relevant employing the device/method of motion estimation as taught by Herpel et al to incorporate the computer program product for motion estimation as taught by the Lee et al so as to save costs associated with the hardware.

### ***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Shawn S An whose telephone number is 703-305-0099. The examiner can normally be reached on Flex hours (10).

11. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



SSA

Primary Patent Examiner

12/26/04